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 Владимир (4922)49-43-18
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 Вологда (8172)26-41-59
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Pilot Operated Relief Valves

These valves protect the hydraulic system from excessive pressure, and can be used to maintain constant pressure in a hydraulic system. Remote control and unloading are permitted by using vent circuits.

Specifications

| Model Numbers | | Max. Operating Pressure MPa | Pres. Adj. Range MPa | Max. Flow L/min | Approx. Mass kg | |
|---------------------|--------------------|-----------------------------|----------------------|-----------------|-----------------|---------|
| Threaded Connection | Sub-plate Mounting | | | | BT Type | BG Type |
| BT-03- *-32 | BG-03- *-32 | 25 | ★ - 25 | 100 | 5.0 | 4.7 |
| BT-06- *-32 | BG-06- *-32 | | | 200 | 5.0 | 5.6 |
| BT-10- *-32 | BG-10- *-32 | | | 400 | 8.5 | 8.7 |

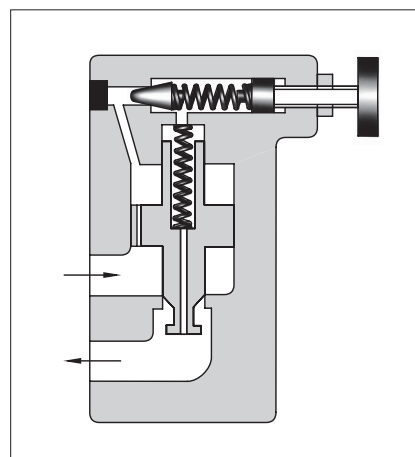
★ Refer to the minimum adjustment pressure characteristics on page C-10.

● For large flow valves (flange connect type), please contact us.

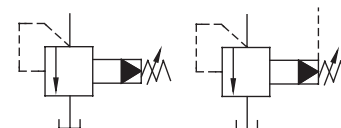
Model Number Designation

| B | T | -03 | -V | -32 |
|----------------------------------|-------------------------|------------|--|---------------|
| Series Number | Type of Mounting | Valve Size | High Venting * Pres. Feature | Design Number |
| B : Pilot Operated Relief Valves | T : Threaded Connection | 03 | V : For High Venting Pressure Feature (Omit if not required) | 32 |
| | | 06 | | 32 |
| | | 10 | | 32 |
| | G : Sub-plate Mounting | 03 | | 32 |
| | | 06 | | 32 |
| | | 10 | | 32 |

★ Use high venting pressure type to reduce the changeover time from unload to onload.



Graphic Symbols



Vent Connection

Accessories

● Mounting Bolts

| Valve Model Numbers | Socket Head Cap Screw |
|---------------------|------------------------------------|
| BG-03 | M12×70L...2 Pcs., M12×95L...2 Pcs. |
| BG-06 | M16×60L...2 Pcs., M16×80L...2 Pcs. |
| BG-10 | M20×70L...2 Pcs., M20×90L...2 Pcs. |

Sub-plates

| Valve Model Numbers | Sub-plate Model Numbers | Thread Size Rc | Approx. Mass kg |
|---------------------|-------------------------|----------------|-----------------|
| BG-03 | BGM-03-20 | 3/8 | 2.4 |
| | BGM-03X-20 | 1/2 | 3.1 |
| BG-06 | BGM-06-20 | 3/4 | 4.7 |
| | BGM-06X-20 | 1 | 5.7 |
| BG-10 | BGM-10-20 | 1 1/4 | 8.4 |
| | BGM-10X-20 | 1 1/2 | 10.3 |

● Sub-plates are available. Specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish. (16)

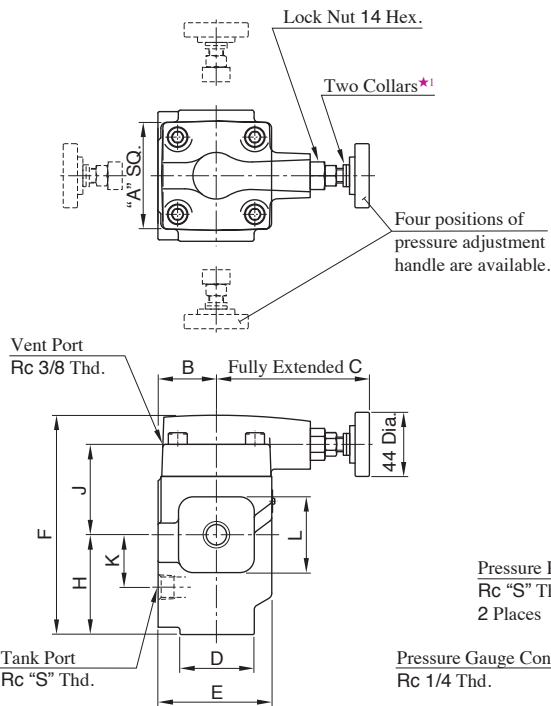
Instructions

- If a remote control relief valve is used in the vent circuit, see page C-5. In addition, if the internal volume of the vent line is too large, chattering is likely to occur. Thus, as far as possible reduce the inside diameter and the length of the pipe.
- To adjust the pressure, loosen the lock nut and turn the handle slowly clockwise for higher pressures or anti-clockwise for lower pressures. After adjustments, do not forget to tighten the lock nut.

- Piping of the tank line should not be connected to any tank line of the other valves, but connected directly to the reservoir.
- With a small flow, the setting pressure may be unstable. Use with a flow rate above the minimum flow as the right chart.

| Valve Size | Min. Flow |
|------------|-----------|
| 03 | 8 L/min |
| 06 | |
| 10 | 15 L/min |

BT-03, 06, 10



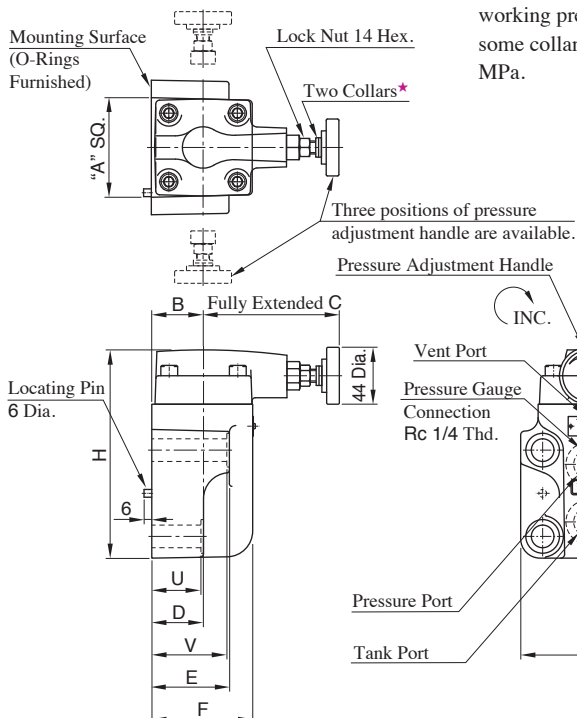
| Model Numbers | A | B | C | D | E | F |
|---------------|----|----|-----|----|----|-------|
| BT-03 | 75 | 40 | 105 | 52 | 78 | 150.5 |
| BT-06 | | | | | | |
| BT-10 | 85 | 50 | 101 | 80 | 96 | 183 |

| Model Numbers | H | J | K | L | N | Q | S |
|---------------|------|----|----|----|-----|----|-------|
| BT-03 | 68.5 | 62 | 36 | 52 | 90 | 45 | 3/8 |
| BT-06 | | | | | | | 3/4 |
| BT-10 | 89 | 74 | 49 | 80 | 120 | 60 | 1 1/4 |

★1. Pressure is limited by collars fitted. If a working pressure cannot be attained, remove some collars. One collar is equivalent to 10 MPa.

★2. There are two threaded connection pressure ports. They can be connected each other in-line; one as inlet and the other as an outlet or the valve can be used by plugging one of the pressure ports.

BG-03, 06, 10



★ Pressure is limited by collars fitted. If a working pressure cannot be attained, remove some collars. One collar is equivalent to 10 MPa.

Mounting Surface

BG-03 : ISO 6264-06-09-1-97
BG-06 : ISO 6264-08-13-1-97
BG-10 : ISO 6264-10-17-1-97

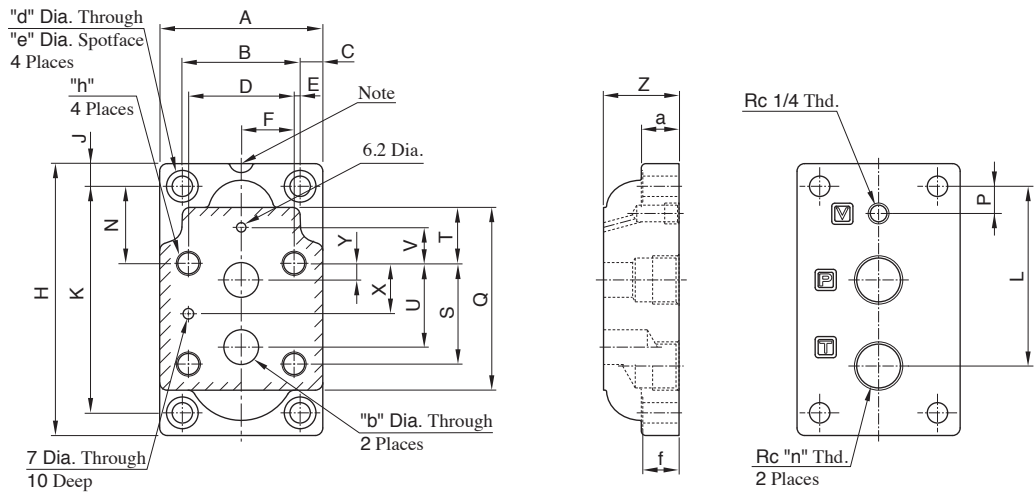
| Model Numbers | A | B | C | D | E | F | H |
|---------------|----|----|-----|----|----|----|-----|
| BG-03 | 75 | 40 | 105 | 57 | 78 | 78 | 137 |
| BG-06 | 75 | 40 | 105 | 40 | 60 | 78 | 161 |
| BG-10 | 85 | 45 | 101 | 47 | 67 | 84 | 195 |

| Model Numbers | J | K | L | N | P |
|---------------|------|----|-----|-----|------|
| BG-03 | 14.1 | 41 | 82 | 117 | 77 |
| BG-06 | 17 | 52 | 104 | 141 | 83.5 |
| BG-10 | 20.7 | 62 | 124 | 175 | 110 |

| Model Numbers | Q | S | T | U | V |
|---------------|-----|------|----|----|----|
| BG-03 | 22 | 13.5 | 21 | 55 | 77 |
| BG-06 | 4.5 | 17.5 | 26 | 38 | 58 |
| BG-10 | 6 | 21.5 | 32 | 45 | 65 |

"S" Dia. Through
"T" Dia. Spotface
4 Places

Sub-plate
BGM-03, 03X
06, 06X
10, 10X



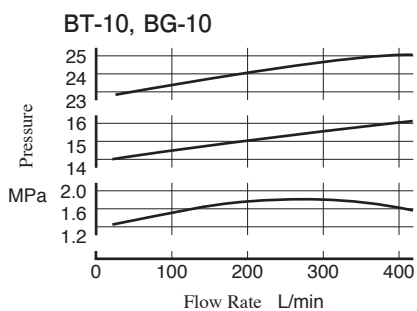
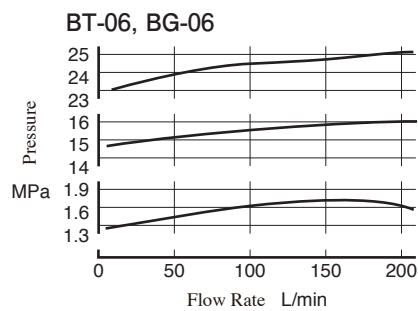
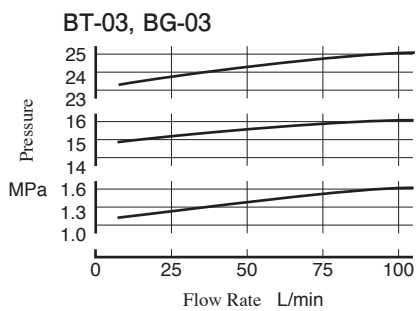
Note) There is the cavity only for BGM- * X.

| Model Numbers | A | B | C | D | E | F | H | J | K | L | N | P | Q | S |
|---------------|-----|----|----|------|-----|------|-----|----|-----|-------|----|------|-----|------|
| BGM-03 | 86 | 60 | 13 | 53.8 | 3.1 | 26.9 | 149 | 13 | 123 | 86 | 32 | 26 | 97 | 53.8 |
| BGM-03X | | | | | | | | | | 95 | | 21 | | |
| BGM-06 | 108 | 78 | 15 | 70 | 4 | 35 | 180 | 15 | 150 | 106.5 | 51 | 27.2 | 121 | 66.7 |
| BGM-06X | | | | | | | | | | 119 | | 18 | | |
| BGM-10 | 126 | 94 | 16 | 82.6 | 5.7 | 41.3 | 227 | 16 | 195 | 138.2 | 62 | 30.2 | 154 | 88.9 |
| BGM-10X | | | | | | | | | | 158 | | 17 | | |

| Model Numbers | T | U | V | X | Y | Z | a | b | d | e | f | h | n |
|---------------|----|------|------|------|------|----|----|------|------|------|----|---------------------|-------|
| BGM-03 | 19 | 47.4 | 0 | 22 | 22 | 32 | 20 | 14.5 | 11 | 17.5 | 19 | M12 Thd. 20 Deep | 3/8 |
| BGM-03X | | | | | | 40 | | | | | | | 1/2 |
| BGM-06 | 37 | 55.5 | 23.8 | 33.4 | 11 | 40 | 25 | 23 | 13.5 | 21 | 24 | M16 Thd. 25 Deep | 3/4 |
| BGM-06X | | | | | | 50 | | | | | | | 1 |
| BGM-10 | 42 | 76.2 | 31.8 | 44.5 | 12.7 | 50 | 32 | 28 | 17.5 | 26 | 31 | M20 Thd. 28 Deep | 1 1/4 |
| BGM-10X | | | | | | 63 | | | | | | | 1 1/2 |

Nominal Override Characteristics

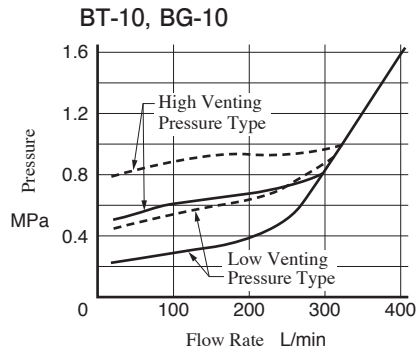
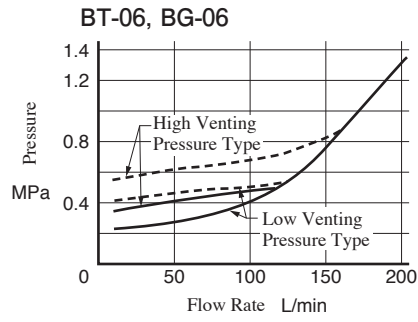
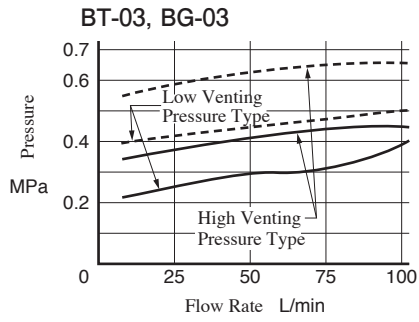
Hydraulic Fluid: Viscosity : 35 mm²/s
 Specific Gravity : 0.850



Min. Adj. Pressure & Vent Pressure vs. Flow

Hydraulic Fluid: Viscosity : 35 mm²/s
Specific Gravity : 0.850

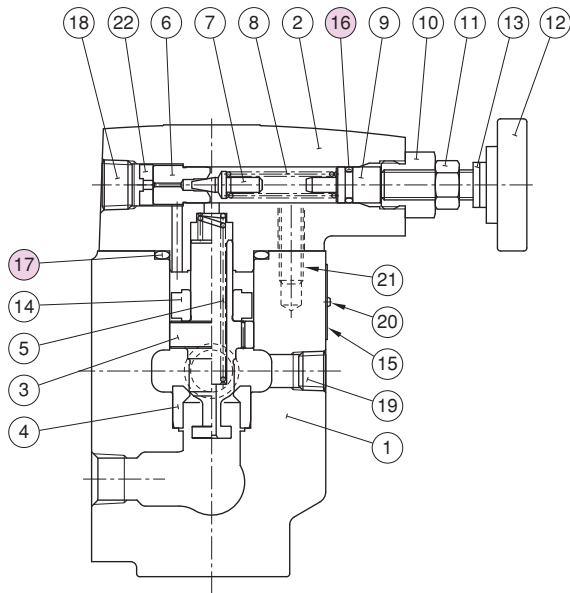
— Vent Pressure
- - - Min. Adjustment Pressure



Note) Venting Pressure is the relieving pressure when the vent port open to tank port.

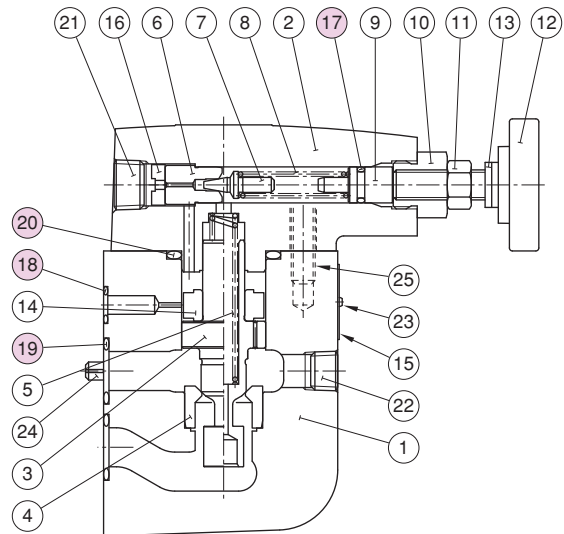
List of Seals

BT-03, 06, 10



| Item | Name of Parts | Part Numbers | | | Qty. |
|------|---------------|---------------------|---------------------|---------------------|------|
| | | BT-03 | BT-06 | BT-10 | |
| 16 | O-Ring | OR NBR-70-1 P9-N | OR NBR-70-1 P9-N | OR NBR-70-1 P9-N | 1 |
| 17 | O-Ring | OR NBR-90 P32-N | OR NBR-90 P32-N | OR NBR-90 P32-N | 1 |

BG-03, 06, 10



| Item | Name of Parts | Part Numbers | | | Qty. |
|------|---------------|---------------------|---------------------|---------------------|------|
| | | BG-03 | BG-06 | BG-10 | |
| 17 | O-Ring | OR NBR-70-1 P9-N | OR NBR-70-1 P9-N | OR NBR-70-1 P9-N | 1 |
| 18 | O-Ring | OR NBR-90 P9-N | OR NBR-90 P11-N | OR NBR-90 P9-N | 1 |
| 19 | O-Ring | OR NBR-90 P18-N | OR NBR-90 P28-N | OR NBR-90 P32-N | 2 |
| 20 | O-Ring | OR NBR-90 P32-N | OR NBR-90 P32-N | OR NBR-90 P42-N | 1 |

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